



Cross Grid Tile - Rectified Tile - and Narrow Grout Joints

Cross-Grid is Crossville's term for precisely rectifying/squaring the tile on all sides so that measurable variance from tile to tile is minimized. For an additional charge per square foot this custom cutting service is available for most of the tile products Crossville produces.

In addition, some of Crossville's most popular tile products come with rectified edges at no additional cost, for example, Bluestone, Color Blox EC series, Ultimetal series, Wood Impressions, NOW 24" x 24" size only, Empire Series, Buenos Aires Mood Series, and the Plan Series.

One of the benefits of this consistent sizing is to allow for narrower grout joints. However, in order to accomplish a recommended grout joint of 1/8", variation in the substrate must also be minimal. The Tile Council of North America Handbook 2011 states on page 34:

"Subsurface Tolerance: Thin-set tile installations have a specified subsurface tolerance, for instance 1/4" in 10', and 1/16" in 1'-0, to conform to ANSI 108.01 and A108.02 for tiles with all edges 15' or less. Since thin-set is not intended to be used in truing or leveling the work of others, Tiles with edges greater than 15" should reflect the more stringent tolerance (e.g., 1/8" in 10' from the required plane, with no more than 1/16" variation in 24" when measured from the high points of the surface.

In addition to the new substrate requirements for tiles over 15" the Tile Council of North America Handbook 2011 further recommends (page 33)

that tiles with any side 18" or greater being placed in a "brick joint/running bond pattern have an offset no greater than 33% and the grout joints on average to be a minimum of 1/8" for rectified tiles and a minimum of 3/16" wide for calibrated tile.

This alteration of the specification should be noted in CSI Section 03100 Concrete Formwork see example:

- **"3.X INSTALLATION** concrete shall be of a flowable consistency (5-inch slump with admixture), pumped and well tamped into place, and finishes compressed and compacted by troweling. Finish slab free from small hollows or bumps and graded to the elevations called for, with depressions in floors between high spots not greater than 1/8-inch below a 10-foot straightedge in accordance with ACI 302 Surface Finish Tolerance, and not vary more than 1/4-inch between opposite exterior walls, unless otherwise called for on the Drawings." If the slab has been prepared properly thin-set methods TCNA F-113 or TCNA F-122 can proceed.
- Remedial measures such as planning or grinding of the slab are sometimes necessary; alternate to these would be building up the slab with patching or self leveling compounds following methods TCNA F200 or TCNA F205.
- Final option would be to recess the slab and carry out a full mud-set application following methods TCNA F111 or TCNA F112.

If variations in the substrate exist or are allowed beyond the tolerances defined above, wider grouts up to 1/4" will become necessary in order to visibly hide the transition from one tile to another. If a uniform grout joint appropriate to the condition of the substrate is not employed, "lippage" of the tile will occur. The Tile Council of North America Handbook states: "Lippage is a condition where one edge of a tile is higher than the adjacent tile, giving the finished surface an uneven appearance and potentially causing a trip hazard."

A= Rectified Tile B= Substrate Improvement (flatter) C= Narrow Grout Joints

A + B = C

There is a balance; A without B and the Customer's expectations are not met, simple as that, so lets all tell the same story.

It is hoped this information provides a better understanding of rectified tile and Crossville's related products.

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